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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

|                              |                           |
|------------------------------|---------------------------|
| In re application of:        | ) Examiner: RICHARD LEE   |
|                              | )                         |
| THOMAS D. HENDERSON, ET AL.  | ) Group Art Unit: 2613    |
|                              | )                         |
| Serial No. 09/013,645        | ) Docket No.: SEXTA 36769 |
|                              | )                         |
| Filed: January 26, 1998      | )                         |
|                              | )                         |
| For: LANDSCAPE CAMERA        | ) Los Angeles, California |
| SYSTEM WITH ELECTRONIC FIELD | ) Date: August 13, 2001   |
| OF VIEW SWITCHING            | )                         |

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Commissioner for Patents  
Washington, D.C. 20231

**APPEAL BRIEF**

On June 12, 2001, Appellant appealed from the Office Action of March 15, 2001, and the Advisory Action of May 25, 2001, finally rejecting Claims 1-3 and 8 of the above-identified pending patent application. The two month deadline from the Notice of appeal

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Serial No. 09/013,645  
Attorney Docket No. SEXTA 36769

date is August 12, 2001, and this Appeal Brief is being filed within the term provided as permitted under 37 C.F.R. § 1.192(a).

### **I. REAL PARTY IN INTEREST**

The real party in interest is SEXTANT IN-FLIGHT SYSTEMS, LLC. This application was originally assigned by the inventors, THOMAS D. HENDERSON and GEORGE W. BATES to NELLCOR PURITAN BENNETT INCORPORATED, by an assignment dated March 12, 1998, which was recorded by the Patent Office on May 22, 1998, beginning at reel 9208, frame 0104. The application was assigned by NELLCOR PURITAN BENNETT INCORPORATED to BE INTELLECTUAL PROPERTY, INC., in an assignment dated April 13, 1998, which was recorded by the Patent Office on April 27, 1998, beginning at reel 9306, frame 0073. The application was assigned by BE INTELLECTUAL PROPERTY, INC. to ACC-TV, INC., by an assignment dated December 14, 1998, as recorded by the Patent Office on January 15, 1999, beginning at reel 9703, frame 0787. ACC-TV, INC. merged with IN-FLIGHT ENTERTAINMENT, LLC, under the name IN-FLIGHT ENTERTAINMENT, LLC, as recorded by the Patent Office on February 24, 1999, beginning at reel 9781, frame 0541. A Certificate of Amendment of Certificate of Formation of In-Flight Entertainment, LLC, changing the name of IN-FLIGHT ENTERTAINMENT, LLC to SEXTANT IN-FLIGHT SYSTEMS, LLC, was filed for recordation with the Patent Office on August 11, 1998.

## **II. RELATED APPEALS AND INTERFERENCES**

None.

## **III. STATUS OF CLAIMS**

This patent application has 4 pending claims. Of the originally filed Claims 1-7, Claims 4-7 were canceled, and Claim 8, corresponding to the subject matter of original Claim 4, was added. Pending Claims 1-3 and 8 were finally rejected in an Office Action dated March 15, 2001, and were rejected in the Advisory Action of May 25, 2001.

## **IV. STATUS OF AMENDMENTS**

An amendment in reply to the Office Action of December 2, 1999 was filed February 5, 2000, canceling claims 4, 5 and 6, and amending Claim 1. Claim 7 was canceled, and Claim 8, corresponding to original Claim 4, was added in the Amendment of July 17, 2000, in reply to the final action of May 17, 2000. The Amendment of July 17, 2000 was entered in connection with a continued prosecution application filed September 5, 2000. Claim 1 was again amended in the Amendment of January 10, 2001, in reply to the Office Action of October 11, 2000.

## V. SUMMARY OF THE INVENTION

Appellant's invention comprises a closed circuit television system for an in flight entertainment system for an aircraft which utilizes digital video technology to obtain multiple fields of view that are selectable for viewing by passengers on the aircraft, from either a single video frame or from multiple cameras with different fields of view.

The **closed circuit television system** (10) of the invention is depicted in Figs. 3 and 4 (as proposed to be corrected in the Amendment of January 10, 2001, and approved by the Examiner). As is recited in Claim 1, the system includes an **in flight entertainment local area network** (IFE LAN) providing audio and video output, as is described at page 5, lines 26-30 and lines 17-20. At least one **video camera** (14), described at page 4, line 31, to page 5, line 5, provides a field of view forward and downward from the aircraft's centerline, and as is described at page 6, lines 6-8, generates a digital video signal providing a plurality of video images. The system includes a plurality of **video display modules** (16) connected to the **in flight entertainment local area network** (IFE LAN) for selecting and displaying a selected video image. A **video camera control module** (12) is connected to the **in flight entertainment local area network** (12), the at least one **video camera** (14) and the plurality of **video display modules** (16) for receiving the digital video signal and providing a plurality of selected video images to the plurality of **video display modules** (16), respectively. A plurality of **personal control units** (18) are connected to the **in flight entertainment local area network** (IFE LAN), each of the plurality of **personal control**

**units (18)** corresponding to respective ones of the plurality of **video display modules (16)** and connected to the **video camera control module (12)** for operating the **video camera control module (12)** to independently select a desired field of view for each of the **video display modules (16)**.

As is recited in Claims 2 and 3, the at least one **video camera (14)** may comprise a **video camera (14)** providing a plurality of fields of view from a single video frame; and the at least one **video camera (14)** may comprise a **video camera (14)** having a 140° field of view lens that can be rotated 90° about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, providing a maximum angular size of the video frame that is approximately 140° horizontally and 128° vertically, and which is 90° from the normal aspect ratio orientation of the lens. As is recited in Claim 8, the at least one **video camera (14)** may comprise a plurality of **video cameras (14)**.

## **VI. ISSUES ON APPEAL**

In the final Office Action of March 15, 2001, Claims 1, 2 and 8 were rejected as obvious from Henderson et al. (5,440,337) in view of Baker et al.(5,508,734), as set forth in the Office Action of October 11, 2000 (Paper No. 14). The Examiner contended that it would have been obvious to one of ordinary skill in the art to provide “the features of a digital camera system, a plurality of video display modules, a video camera control module,

and a plurality of personal control units as taught by Baker et al. for the closed circuit television system for an aircraft of Henderson et al. for the same well known flight entertainment purposes.”

Claim 3 (reciting the features of the lens of the video camera), was also rejected as obvious from Henderson et al. in view of Baker et al. as applied to Claims 1, 2 and 8 further in view of In re Aller, 220 F.2d 454,456, 105 USPQ 233,235 (CCPA 1955), (“where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”) as set forth in the Office Action of May 17, 2000 (Paper No. 9). The Examiner contended that “it would have been obvious to one of ordinary skill in the art at the time of the invention was made to arrive at the desired numerical angle values to facilitate to one’s needs through routine experimentation.”

Henderson et al. was cited as showing substantially the claimed closed circuit television system for an in flight entertainment system for an aircraft in Figure 4, as described from column 5, line 4 to column 6, line 25. Claim 1 recites “a plurality of personal control units connected to said in flight entertainment local area network, each of said plurality of personal control units corresponding to respective ones of said plurality of video display modules and connected to said video camera control module for operating the video camera control module to independently select a desired field of view for each of said video display modules.” In the Office Action of October 11, 2000, the Examiner indicated

that Henderson et al. did not disclose a plurality of personal control units each corresponding to respective ones of the plurality of video display modules and connected to the video camera control module for operating the video camera control module to independently select a desired field of view for each of said video display modules.

Baker et al. was cited as showing a plurality of video display modules and a plurality of personal control units, in Figure 8. Referring to column 12, lines 6-8, lines 28-41 and column 13, lines 8-13 of Baker et al., the Examiner argued that Baker et al. discloses a plurality of personal control units attached to each of the video control modules 80, to provide substantially the same if not the same independent selection of a desired field of view for each of the video display modules as claimed.

In view of the Examiner's rejections, Appellant respectfully submits that the issue on appeal is as follows:

Whether it would have been obvious from Henderson et al. in view of Baker et al., taken as a whole, to provide the system of Henderson et al. with a plurality of personal control units for multiple users for independently controlling their own individual displays, so as to render Claims 1, 2, 3 and 8 obvious from Henderson et al. in view of Baker et al. under 35 U.S.C. 103.

## **VII. GROUPING OF CLAIMS**

Claims 1-3 and 8 stand or fall together.

## **VIII. ARGUMENTS**

**It would not have been obvious from Henderson et al. in view of Baker et al., taken as a whole, to provide the system of Henderson et al. with a plurality of personal control units for multiple users for independently controlling their own individual displays, so as to render Claims 1, 2, 3 and 8 obvious from Henderson et al. in view of Baker et al. under 35 U.S.C. 103.**

In the Office Action of October 11, 2000, the Examiner admitted that Henderson et al. did not disclose a plurality of personal control units each corresponding to respective ones of the plurality of video display modules and connected to the video camera control module for operating the video camera control module to independently select a desired field of view for each of said video display modules.

Baker et al. was cited as showing a plurality of video display modules and a plurality of personal control units, in Figure 8. However, Figure 8 of Baker et al. does not identify any elements as personal control units. The Examiner argued that Baker et al. discloses a plurality of personal control units attached to each of the video control modules 80, to provide substantially the same if not the same independent selection of a desired field of view for each of the video display modules as claimed, in column 12, lines 6-8, lines 28-41 and column 13, lines 8-13 of Baker et al. Figure 8 of Baker et al. shows a plurality of image processing subsystems 80, connected to a corresponding plurality of random access memory digital-to-analog converters (RAMDAC) 78, each of which are shown as having



outputs to displays. However, the random access memory digital-to-analog converters do not operate as personal control units for multiple users for independently controlling their own individual displays. Furthermore, no input is shown or disclosed as coming from the displays, so that the image processing subsystems would not operate as a plurality of personal control units for multiple users for independently controlling their own individual displays.

Further, in Fig. 8 of Baker et al., the data and control inputs to the image processing and warping circuits, shown as coming from a host bus 76, are described in Baker et al. at column 11 lines 62-64 as a bus interface and control circuitry providing an interface to the host system, such as MCA (IBM's 32 bit bus) and ISA (a PC expansion bus, used for modems, video displays, speakers, and other peripherals). Thus the data and control features of Baker et al. also do not provide any teaching, disclosure or suggestion of a "plurality of personal control units."

Baker et al. further contains no motivation for providing "plurality of personal control units," and ultimately teaches directly away from providing a "plurality of personal control units" for multiple users for independently controlling their own individual displays. In column 1, lines 8-10 and 31-45 of Baker et al. it is explained that Baker et al. relates to visual imaging system and techniques which provide electronic manipulation of wide angle hemispheric scenes, such as the multimedia technique used at theme parks, of displaying on a screen or collection of screens that covers almost 360 degrees field of view. In displaying

such a scene in a 360 degree field of view, the display constructs abutting subimages. According to the cited passage in Baker et al., at column 12, lines 6-8, the system of Baker et al. “allows the user to construct abutting subimages in the (x,y) plane without danger of edge interference.” As the patent then goes on to say “Thus, edge detection of the unused areas outside the circular image of Fig. 5 can alert the system to ignore these values”. Nothing about the cited passage, or for that matter, any of the Baker reference, suggests a plural of users having an individual control for assembling of images. Instead, the entire Baker reference relates to the automatic imaging system for producing in a hemispheric field of view emphasizing peripheral content. In fact, if a plurality of controls were allowed by Baker et al., with independent control by a plurality of users, it is completely unreasonable to conclude that such abutting subimages for a unified 360 degree field of view scene emphasizing details on the hemispheric periphery would be achieved. It is therefore submitted that the Examiner’s interpretation of Baker et al. as teaching a plurality of personal control units is untenable.

## **IX. CONCLUSION**

For the foregoing reasons, it is submitted that it would not have been obvious from Henderson et al. in view of Baker et al., taken as a whole, to provide the system of Henderson et al. with a plurality of personal control units for multiple users for

independently controlling their own individual displays, and that the Examiner's rejections of Claims 1-3 and 8 were therefore erroneous. Appellant respectfully requests reversal of the rejection of Claims 1-3 and 8.

Respectfully submitted,  
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## X. APPENDIX

### CLAIMS ON APPEAL:

1. A closed circuit television system for an in flight entertainment system for an aircraft, said system comprising:

an in flight entertainment local area network providing audio and video output;

at least one video camera providing a field of view forward and downward from the aircraft's centerline, said at least one video camera generating a digital video signal providing a plurality of video images;

a plurality of video display modules connected to said in flight entertainment local area network for selecting and displaying a selected video image;

a video camera control module connected to said in flight entertainment local area network, said at least one video camera and said plurality of video display modules for receiving said digital video signal and providing a plurality of selected video images to said plurality of video display modules, respectively; and

a plurality of personal control units connected to said in flight entertainment local area network, each of said plurality of personal control units corresponding to respective ones of said plurality of video display modules and connected to said video camera control module for operating the video camera control module to independently select a desired field of view for each of said video display modules.

2. The system of Claim 1, wherein said at least one video camera comprises a video camera providing a plurality of fields of view from a single video frame.

3. The system of Claim 1, wherein said at least one video camera comprises a video camera having a  $140^{\circ}$  field of view lens that can be rotated  $90^{\circ}$  about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, providing a maximum angular size of the video frame that is approximately  $140^{\circ}$  horizontally and  $128^{\circ}$  vertically, and which is  $90^{\circ}$  from the normal aspect ratio orientation of the lens.

8. The system of Claim 1, wherein said at least one video camera comprises a plurality of video cameras.